



OCT 21 2005 **IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**PATENT**

In re application of: Sayag

Attorney Docket No.: SAY1P004D1

Application No.: 10/789,547

Examiner: LEE, SHUN, K.

Filed: February 26, 2004

Group: 2878

Title: LIGHT STIMULATING AND  
COLLECTING METHODS AND APPARATUS  
FOR STORAGE-PHOSPHOR IMAGE PLATES

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on October 19, 2005 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: \_\_\_\_\_

Mia Mitchell-Haynes

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the attached sheets.

Remarks begin on page 2 of this paper.

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## **REMARKS**

### **The Examiner Mischaracterized the Teachings of the Primary Reference**

In the first office action after an RCE mailed on July 11, 2005, the Examiner maintained his previous rejections of claims 1 and 9-22 under 35 U.S.C. 103(a) over International Publication No. WO/99/28765 (Mueller) in view of a variety of other references. The Examiner has repeatedly misconstrued and mischaracterized the teachings of the Mueller reference as described below.

Mueller describes an x-ray cassette which contains a phosphor carrier and a device for reading out information stored in the phosphor carrier. The device includes a radiation source for exciting the phosphor carrier, and a receiving means for receiving the resulting radiation. See Abstract. Referring to the description in U.S. Patent No. 6,373,074 (i.e., the U.S. patent claiming priority from Mueller), the receiving means is described as a CCD 12 in combination with a Selfoc lens assembly 14 which focuses the excitation radiation on the individual elements of the CCD. See column 5, lines 10-27. Notably, Mueller states that “[i]t is possible to limit the thickness of the x-ray cassette to about 45 mm.”

Despite the language in Mueller (or any other reference) regarding compatibility with conventional equipment, none of the references teaches a device which can conform to the form factor recited in claim 1 and referred to in the present specification. Rather, Mueller indicates that its lower limit on “cassette” (i.e., bucky) thickness is at least three times the upper limit of the preferred standard cassettes defined by IEC 60406. This is due to the fact that the receiving means in Mueller, i.e., the CCD and Selfoc lens system, cannot be compressed below the stated limit of 45 mm due in large part to optical considerations. This is to be contrasted with the present invention which offers a variety of embodiments which are not so constrained.

Therefore, because Mueller’s system cannot be enclosed in a cassette having a “form factor corresponding to a thickness of the cassette enclosure of about 0.6 inches” as recited in claim 1, the rejection of claim 1 over the combination of Mueller, Alvarez, and IEC 60406 is believed overcome. Indeed, the fact that the apparatus taught by Mueller cannot fit within the maximum thickness prescribed by IEC 60406 makes it clear that the combination of Mueller’s teachings with those of IEC 60406 is improper. The rejections of claims 2-22 are believed overcome for at least the reasons discussed.

The Examiner disagreed with the Applicant's arguments in the previous response stating that the 45 mm limit to which Mueller refers "is merely an example of the very small dimensions of the x-ray cassette and is not an express teaching of a lower limit of ~45 mm." The Examiner went on to say that the "applicant's argument that the cassette thickness cannot be manufactured with very small dimensions due to optical considerations such as the Selfoc lens is not persuasive since the Selfoc lens is optional."

With regard to the first point, the Applicant respectfully disagrees. In describing a key advantage, Mueller states that his technique makes it possible "to limit the thickness of the x-ray cassette to about 45 mm." It strains credibility to assert that this is "not an express teaching of a lower limit." In addition to use of the term "limit" with reference to the phrase "about 45 mm," the inventor is describing a key advantage of his invention. To assert that the inventor would not refer to the absolute minimum value he thought possible is simply not an accurate reading of the reference.

With regard to the second point, the Examiner mischaracterizes Mueller's statement at column 5, lines 12-14. Mueller is not saying that some form of lens is not required, but that having an individual Selfoc lens "for each stimuable point of the line of the phosphor plate...is not required for the invention." That is, the large array of Selfoc lenses contemplated by lines 12-13 of column 5 is not necessary. However, as would be understood by one of ordinary skill in the art, Mueller does not suggest that optical elements (e.g., a single Selfoc lens or the equivalent) between the plate and the photodetector are unnecessary. To the contrary, it would be apparent to one of ordinary skill in the art that Mueller's system would not work without some form of relay optics to focus the radiation from the plate on the CCD.

That is, the manner in which Mueller's technique reads out the information stored in a phosphor plate and the size of the CCD require some distance between the phosphor plate and the CCD assembly which, in turn, requires an optical system to transmit light from the plate to the CCD, i.e., to focus the light on the CCD. This can be understood with reference to Fig. 1 of Mueller.

As shown in that figure, the size of CCD assembly 12 and the requirement that it be placed at an angle and off to the side of laser diodes 11 (so as to be able to receive the emitted radiation) requires a minimum physical spacing which, in turn, requires the use of an intervening optical

relay. This, therefore, forces a minimum size on the assembly which Mueller himself states to be “about 45 mm.”

By contrast, the readout mechanism employed by the present invention allows the image capture devices (e.g., photodetector array 114 of Fig. 1) to be placed in extremely close proximity to the surface of phosphor plate 104. This allows for embodiments without bulky intervening optical elements which, in turn, enables a much thinner assembly geometry (i.e., about 0.6 inches) to be achieved.

Thus, because of the geometry imposed by Mueller’s readout technique, a device constructed in the manner described cannot even approach a “form factor corresponding to a thickness of the cassette enclosure of about 0.6 inches.”

In view of the foregoing, the teaching of Mueller cannot be combined with IEC 60406 to obviate any of the claims of the present invention. The Applicant therefore respectfully requests that the rejection of claim 1 over Mueller, Alvarez, and IEC 60406 be withdrawn. In addition, dependent claims 2-22 are also believed to be allowable over the cited art for at least the reasons discussed.

In support of the foregoing arguments, a Declaration Under 37 C.F.R. 1.132 was submitted with the previous response in which the inventor for the present application explains the technical bases for the proposition that the system described by Mueller cannot conform to the form factor recited in the present claims. More specifically, the inventor makes it clear why Mueller’s design requires some form of optical relay is required to focus light on his CCD, and is therefore not capable of being confined within a cassette having the form factor recited in the claims of the present application..

In conclusion, one of skill in the relevant art has provided evidence in this case that it is physically impossible for the system described in Mueller to conform to a form factor as recited in the claims of the present application. However, the Examiner has chosen to disregard this evidence and fundamental principles of optics in favor of his unsupportable interpretation of the Mueller reference. The Applicant respectfully requests that these issues be reviewed prior to the appeal process to avoid any further unnecessary delay in the prosecution of the present application.

In view of the foregoing, it is respectfully submitted that the rejections of all pending claims should be withdrawn.

Respectfully submitted,  
BEYER WEAVER & THOMAS, LLP

A handwritten signature in black ink, appearing to read "Joseph M. Villeneuve", followed by a long horizontal flourish.

Joseph M. Villeneuve  
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